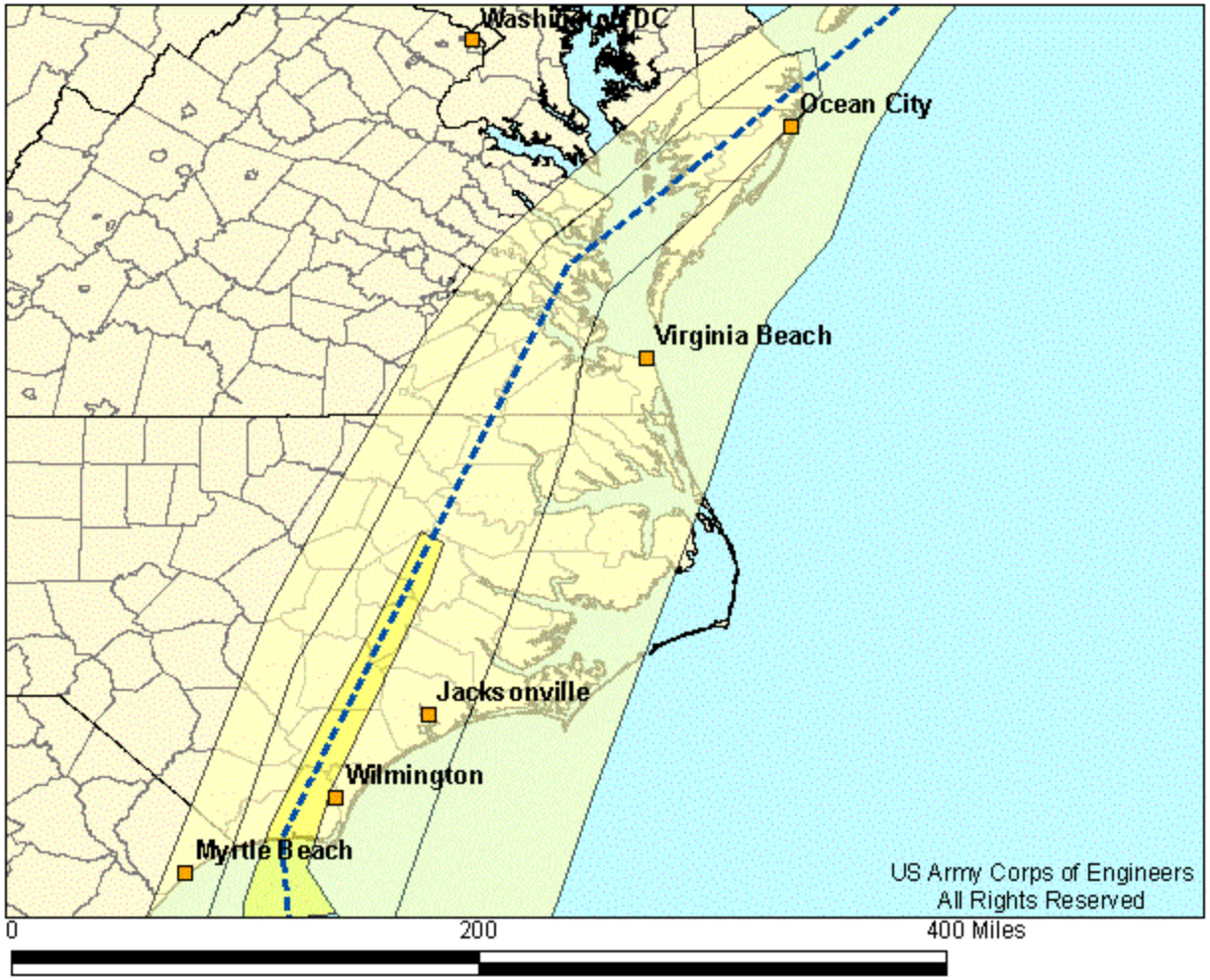
US Army Corps of Engineers

Hurricane Hanna Projected Damage Areas

Landfall Expected In About 33 Hours

For Planning Purposes Only!



Post Landfall Projected Damage Areas

This model is based on a Category 1 storm making landfall nearWilmington, NC.

Forecast Track

Projected Damage Areas

- CAT 0-type damage
- CAT 1-type damage
- CAT 2-type damage
- CAT 3-type damage
- CAT 4-type damage
- CAT 5-type damage

Information provided on this page displays a Category 1 storm making landfall nearWilmington, NC. These projections are based on information from the NHC (1700 EDT 09/04/2008) forecast.

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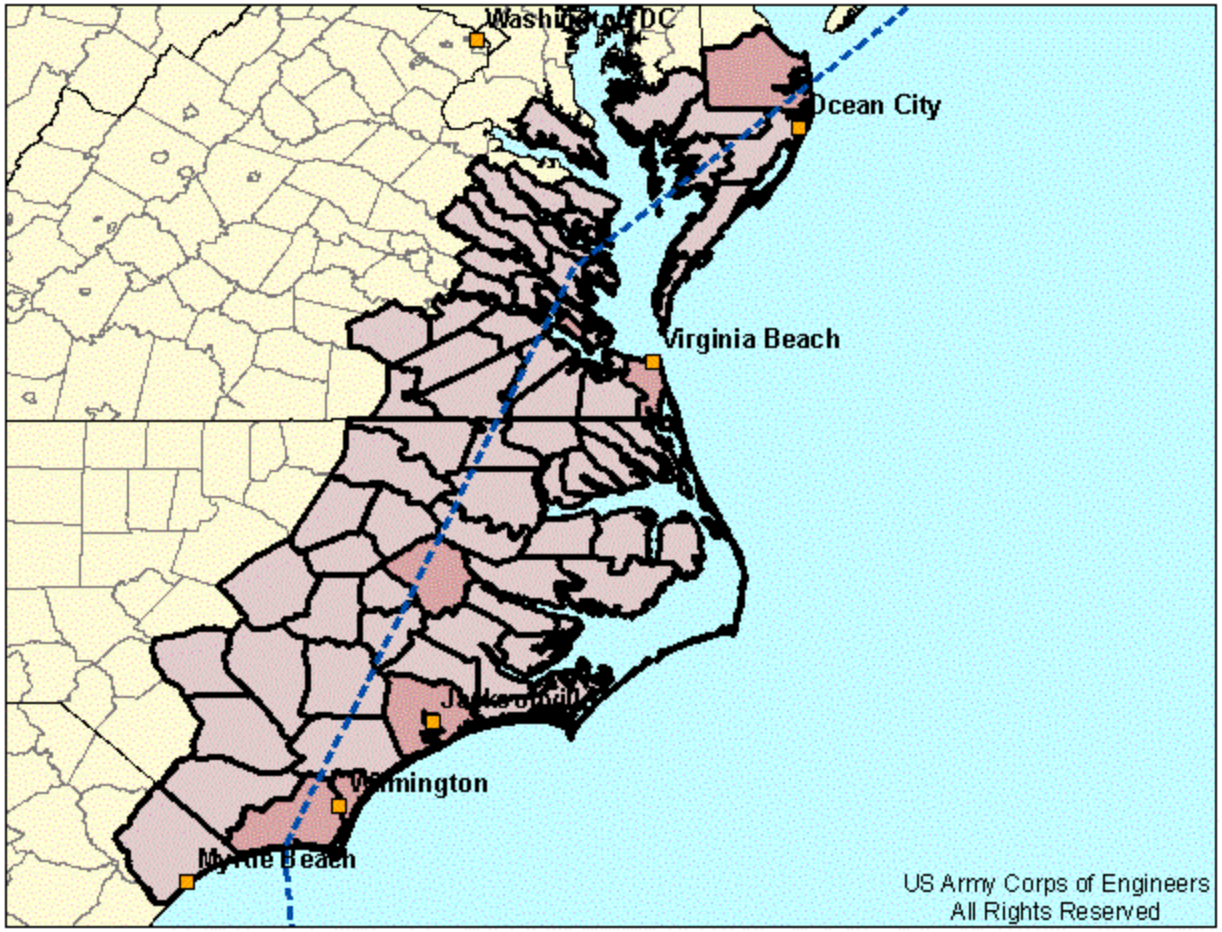
Hurricane Hanna Projected Damage Areas	
Generated By: Siemsen, LRL 1730 EDT 09/04/2008	
Sources: HURREVAC LRL-DEBRIS	Page 1 of 12

US Army Corps of Engineers

Hurricane Hanna Debris Model

Landfall Expected In About 33 Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

North Carolina - 1,716,000 Yards
Virginia - 1,006,000 Yards
Maryland - 168,000 Yards
Delaware - 107,000 Yards
South Carolina - 56,000 Yards

Model results per County on following page

This model is based on a Category 1 storm making landfall nearWilmington, NC.

Forecast Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 1 storm making landfall nearWilmington, NC. These projections are based on information from the NHC (1700 EDT 09/04/2008) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Hanna Debris Model

Generated By:
Siemsen, LRL 1730 EDT 09/04/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Debris Model

Landfall Expected In About 33 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Delaware		Sussex	107,000
Delaware	107,000		
Maryland		Dorchester	5,000
		Somerset	27,000
		St Mary's	2,000
		Wicomico	71,000
		Worcester	63,000
Maryland	168,000		
North Carolina		Beaufort	64,000
		Bertie	32,000
		Bladen	15,000
		Brunswick	137,000
		Camden	7,000
		Carteret	44,000
		Chowan	13,000
		Columbus	32,000
		Craven	96,000
		Cumberland	< 1,000
		Currituck	14,000
		Dare	12,000
		Duplin	68,000
		Edgecombe	46,000
		Gates	16,000
		Greene	22,000
		Halifax	36,000
		Hertford	32,000
		Hyde	6,000
		Johnston	18,000
		Jones	19,000

State	Yards per State	County	Yards per County
North Carolina		Lenoir	62,000
(continued)		Martin	29,000
		Nash	40,000
		New Hanover	216,000
		Northampton	21,000
		Onslow	165,000
		Pamlico	10,000
		Pasquotank	23,000
		Pender	93,000
		Perquimans	9,000
		Pitt	142,000
		Sampson	34,000
		Tyrrell	5,000
		Washington	15,000
		Wayne	78,000
		Wilson	45,000
North Carolina	1,716,000		
South Carolina		Horry	56,000
South Carolina	56,000		
Virginia		Accomack	28,000
		Charles City	4,000
		Chesapeake city	62,000
		Dinwiddie	< 1,000
		Emporia City	4,000
		Essex	< 1,000
		Franklin City	11,000
		Gloucester	35,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Hanna Debris Model

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Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Debris Model

Landfall Expected In About 33 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Virginia		Greensville	4,000
(continued)		Hampton City	54,000
		Isle Of Wight	37,000
		James City	53,000
		King And Queen	4,000
		King William	3,000
		Lancaster	13,000
		Mathews	13,000
		Middlesex	13,000
		New Kent	6,000
		Newport News city	141,000
		Norfolk City	88,000
		Northampton	8,000
		Northumberland	12,000
		Poquoson City	12,000
		Portsmouth city	47,000
		Prince George	10,000
		Richmond	2,000
		Southampton	23,000
		Suffolk City	54,000
		Surry	10,000
		Sussex	11,000
		Virginia Beach city	164,000
		Williamsburg city	13,000
		York	67,000
Virginia	1,006,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane Hanna Debris Model

Generated By:
Siemsen, LRL 1730 EDT 09/04/2008

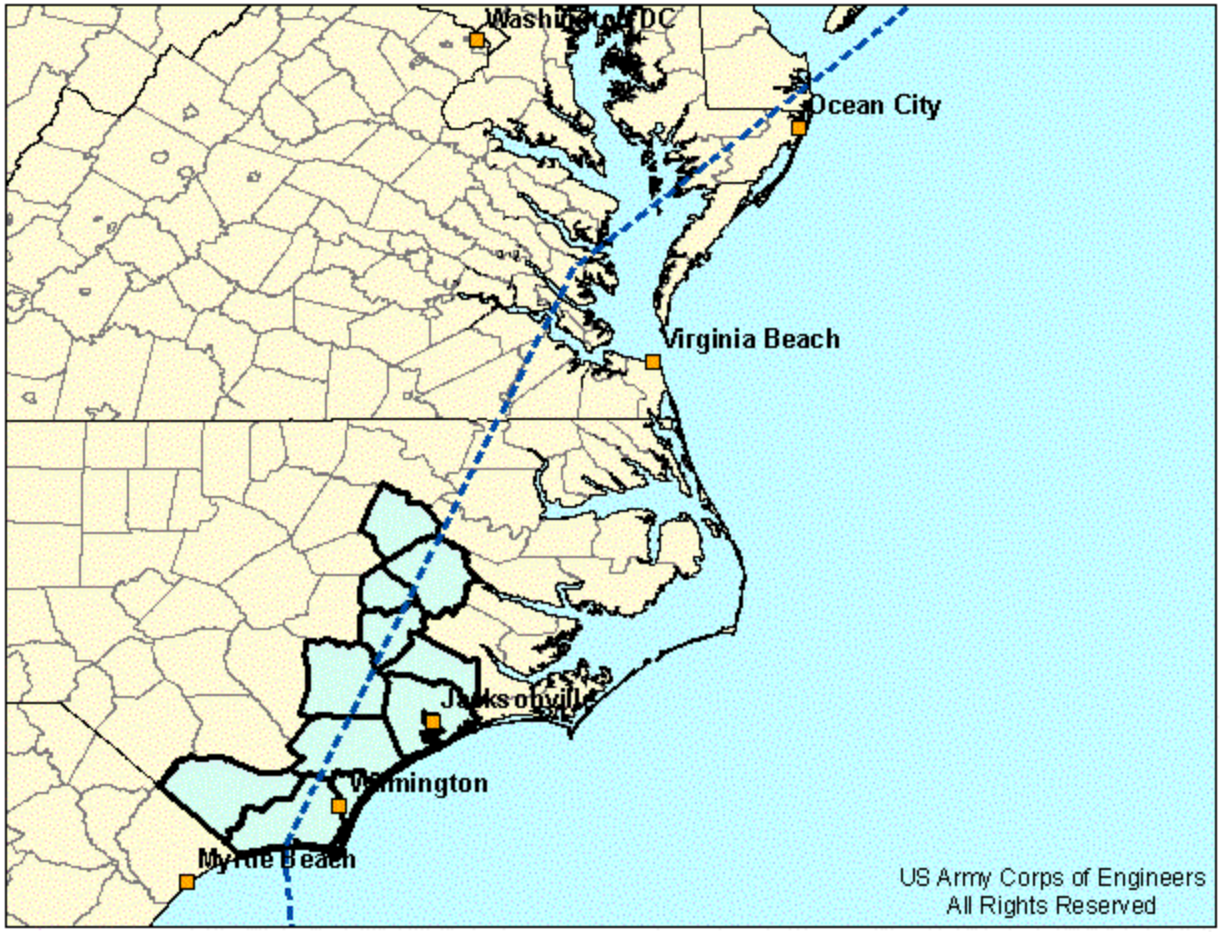
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Commodities Model

Landfall Expected In About **33** Hours

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three
North Carolina – 5/9/18
Truckloads

Model results per County on following page

This model is based on a Category 1 storm making landfall nearWilmington, NC.

Forecast Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 1 storm making landfall nearWilmington, NC. These projections are based on information from the NHC ***(1700 EDT 09/04/2008)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Hanna Commodities Model	
Generated By: Siemsen, LRL 1730 EDT 09/04/2008	
Sources: HURREVAC LRL-DEBRIS	Page 5 of 12

US Army Corps of Engineers

Hurricane Hanna Commodities Model

Landfall Expected In About 33 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
North Carolina		Brunswick	3
		Columbus	1
		Duplin	1
		Edgecombe	1
		Greene	1
		Jones	1
		Lenoir	2
		New Hanover	1
		Onslow	1
		Pender	2
		Pitt	4
North Carolina	18		

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane Hanna Commodities Model

Generated By:
Siemsen, LRL 1730 EDT 09/04/2008

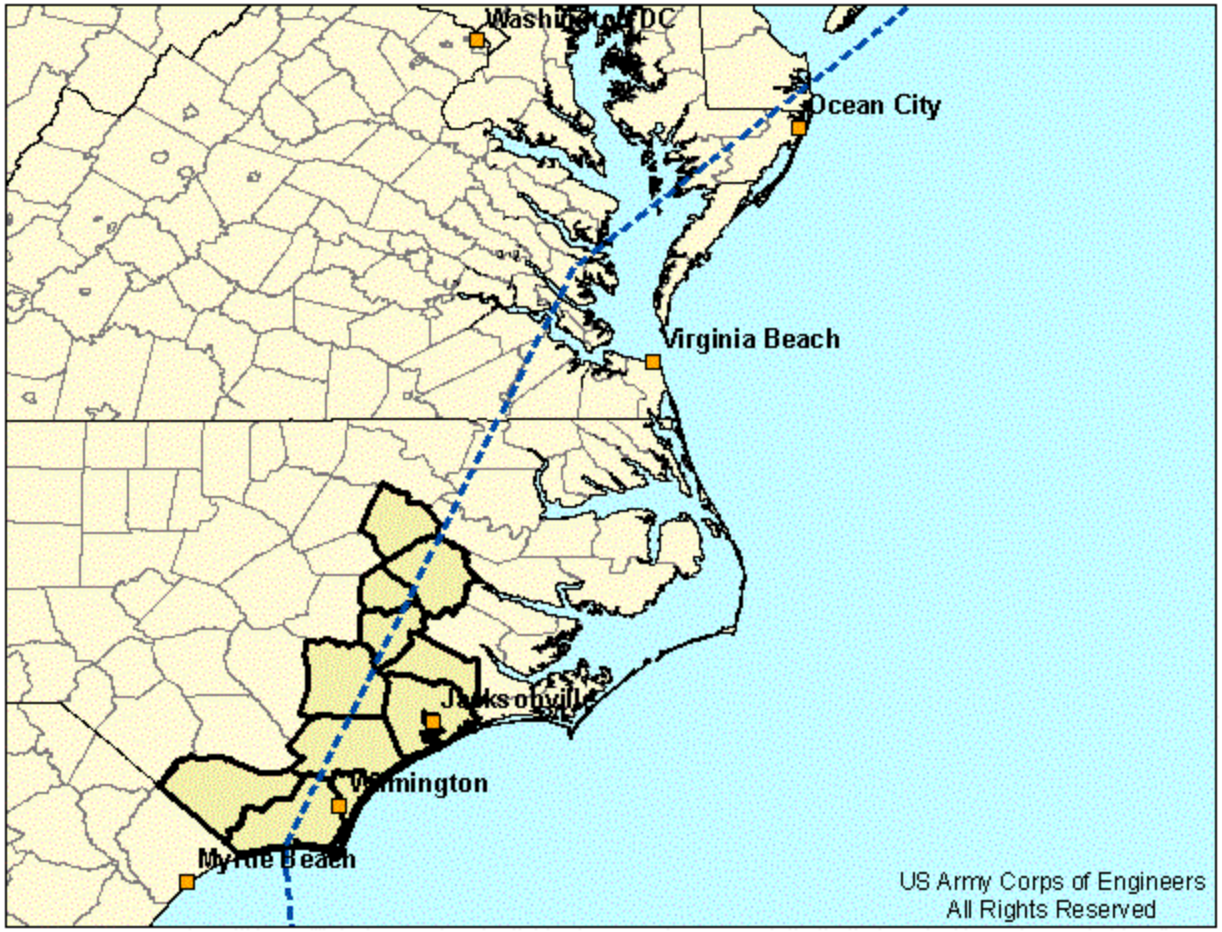
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Temporary Roofing Model

Landfall Expected In About 33 Hours

For Planning Purposes Only!



Post Landfall Temporary Roofing Model Results

North Carolina - 900

Model results per County on following page

This model is based on a Category 1 storm making landfall nearWilmington, NC.

Forecast Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 1 storm making landfall nearWilmington, NC. These projections are based on information from the NHC (1700 EDT 09/04/2008) forecast. Temporary roofing is based on 1% in CAT 1.

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Hurricane Hanna Roofing Model	
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Sources: HURREVAC LRL-DEBRIS	Page 7 of 12

US Army Corps of Engineers

Hurricane Hanna Temporary Roofing Model

Landfall Expected In About 33 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
North Carolina		Brunswick	300
		Columbus	< 100
		Duplin	< 100
		Edgecombe	< 100
		Greene	< 100
		Jones	< 100
		Lenoir	200
		New Hanover	< 100
		Onslow	< 100
		Pender	< 100
		Pitt	400
North Carolina	900		

Temporary roofing is based on 1% in CAT 1.

Details about this model may be obtained at http://www.enqlink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Hanna Roofing Model

Generated By:
Siemsen, LRL 1730 EDT 09/04/2008

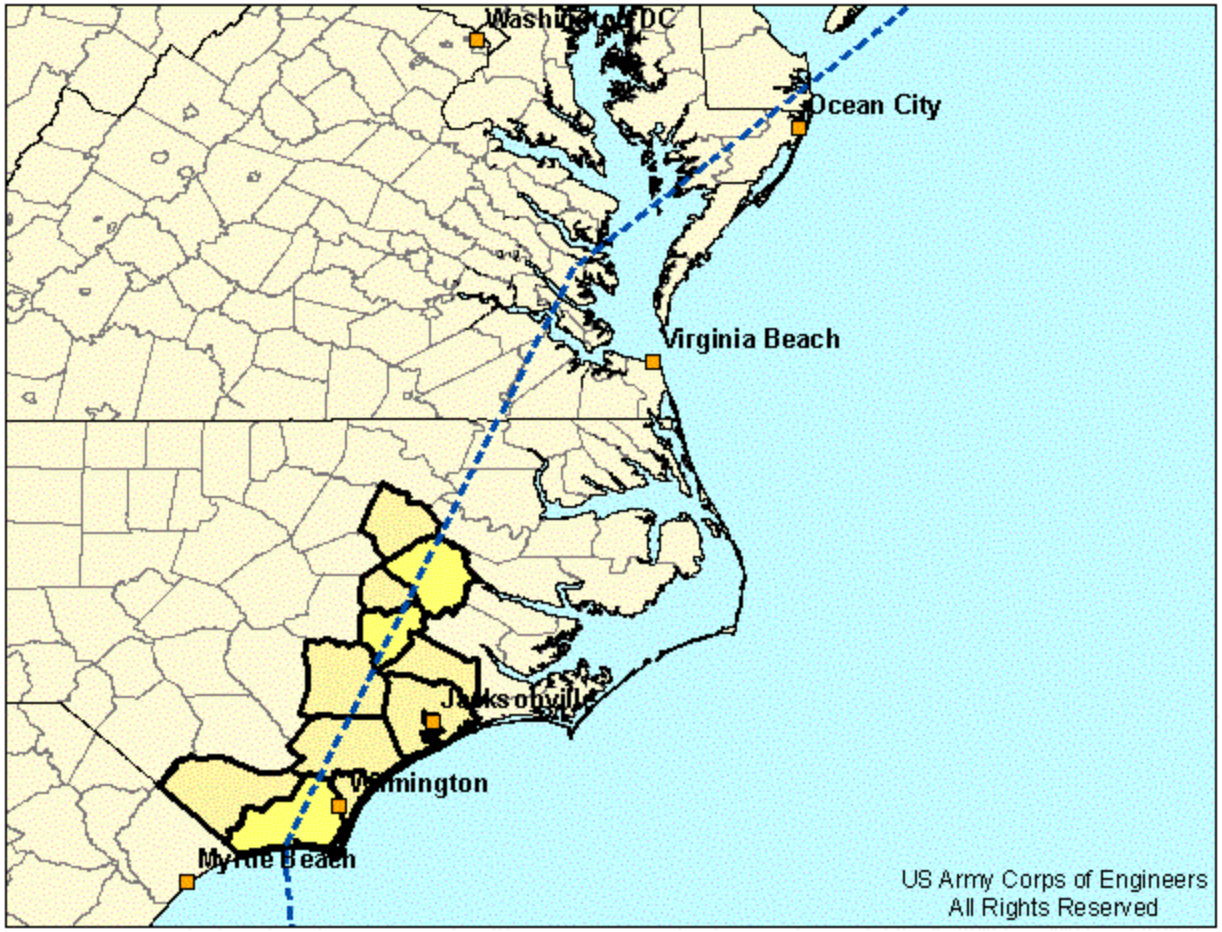
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Population Model

Landfall Expected In About 33 Hours

For Planning Purposes Only!



Post Landfall Population Model Results

North Carolina - 247,000

Model results per County on following page

This model is based on a Category 1 storm making landfall nearWilmington, NC.

Forecast Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 1 storm making landfall nearWilmington, NC. These projections are based on information from the NHC (1700 EDT 09/04/2008) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2007 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Hanna Population Model	
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Sources: HURREVAC LRL-DEBRIS	Page 9 of 12

US Army Corps of Engineers

Hurricane Hanna Population Model

Landfall Expected In About **33** Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
North Carolina		Brunswick	57,000
		Columbus	< 1,000
		Duplin	20,000
		Edgecombe	< 1,000
		Greene	6,000
		Jones	< 1,000
		Lenoir	46,000
		New Hanover	6,000
		Onslow	< 1,000
		Pender	25,000
		Pitt	87,000
North Carolina	247,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2007 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane Hanna Population Model

Generated By:
Siemsen, LRL 1730 EDT 09/04/2008

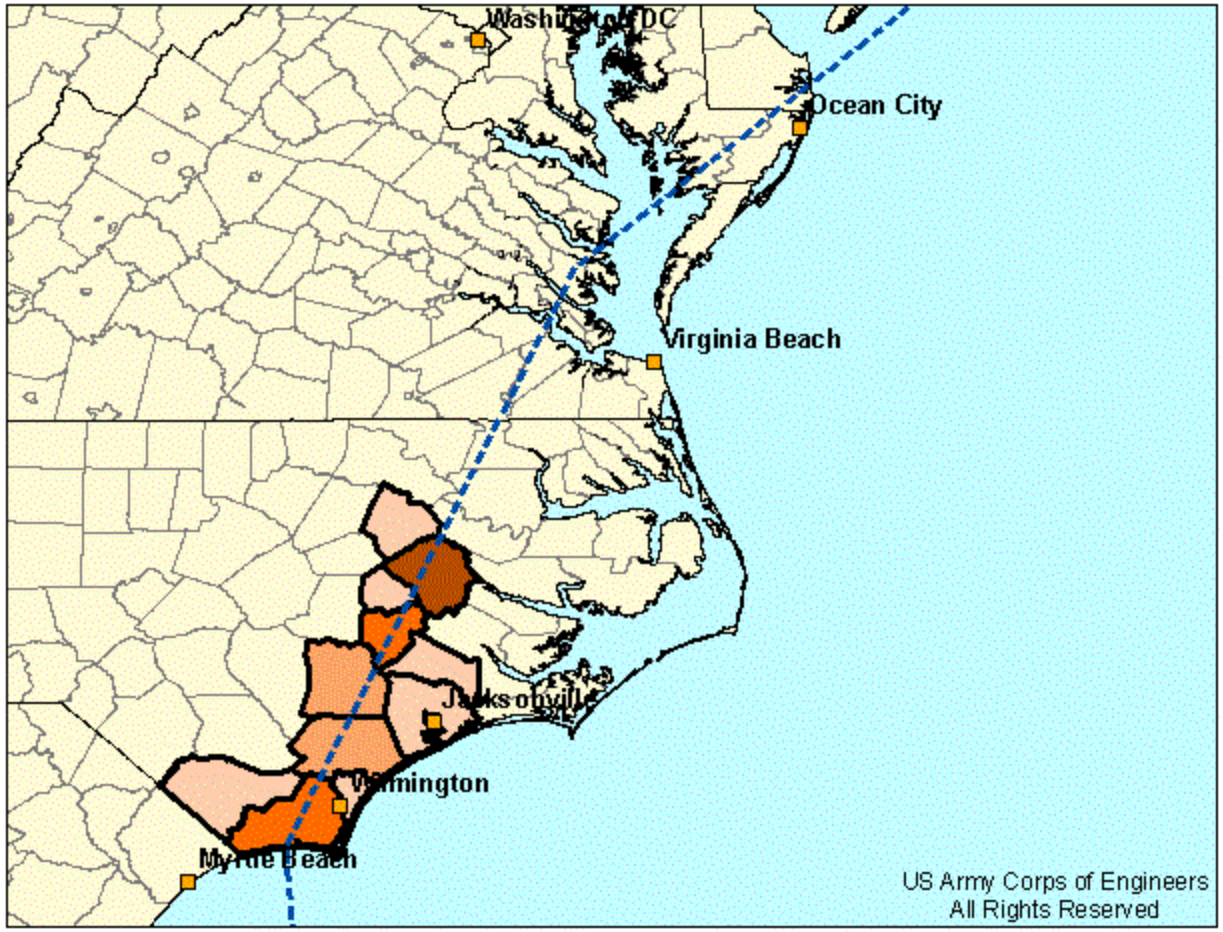
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Households Model

Landfall Expected In About **33** Hours

For Planning Purposes Only!



Post Landfall Households Model Results

North Carolina - 100,000

Model results per County on following page

This model is based on a Category 1 storm making landfall nearWilmington, NC.

Forecast Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 1 storm making landfall nearWilmington, NC. These projections are based on information from the NHC (1700 EDT 09/04/2008) forecast. The numbers of households included in this model output are those that would be included within estimated hurrican eforce winds (Census 2000 values adjusted to July 2007 values).

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Hurricane Hanna Households Model	
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Sources: HURREVAC LRL-DEBRIS	Page 11 of 12

US Army Corps of Engineers

Hurricane Hanna Households Model

Landfall Expected In About 33 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
North Carolina		Brunswick	23,000
		Columbus	< 1,000
		Duplin	8,000
		Edgecombe	< 1,000
		Greene	3,000
		Jones	< 1,000
		Lenoir	19,000
		New Hanover	3,000
		Onslow	< 1,000
		Pender	10,000
		Pitt	34,000
North Carolina	100,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2007 values.

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LRL-DEBRIS